Notice of Allowability	Application No.	Applicant(s)	
	09/913,883	AUPAIX ET AL.	
	Examiner	Art Unit	
	Daniel S. Metzmaier	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *04 June 2004*.

2. ☒ The allowed claim(s) is/are *3-8,10 and 16-22*.

3. ☐ The drawings filed on _____ are accepted by the Examiner.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *06212004* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jeffrey G. Killian on June 21, 2004.

The application has been amended as follows:

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Canceled)

2. (Canceled)

3. (Previously Presented) Process according to claim 17, wherein the titanium oxide particles are at least partially covered:

- by a first layer of at least one cerium and/or iron compound, and
- by a second layer of at least one silicon oxide, hydroxide or oxyhydroxide or metallic oxide, hydroxide or oxyhydroxide.

4. (Previously Presented) Process according to claim 17, wherein the titanium oxide particles have a BET specific surface area of at least 70 m^2/g.

5. (Previously Presented) Process according to claim 17, wherein a ratio by weight of the silicon oxide(s), hydroxide(s) or oxyhydroxide(s) or metallic oxide(s), hydroxide(s) or oxyhydroxide(s) to titanium dioxide is at most 60% by weight.

6. (Previously Presented) Process according to claim 3, wherein the first aforementioned layer is based on at least one cerium compound with a content such that a ratio by weight of the cerium compound, expressed in CeO2, to the titanium dioxide is at most 6% by weight.

7. (Previously Presented) Process according to claim 17, wherein the titanium oxide particles are at least partially covered by at least one layer based on silica oxide, hydroxide or oxyhydroxide and/or aluminum oxide, hydroxide or oxyhydroxide.

8. (Previously Presented) Process according to claim 17, wherein the organic liquid phase is based on a polar solvent.

9. (Canceled)

10. (Previously Presented) Process according to claim 17, wherein the organic phase comprises a polar solvent selected from the group consisting of halogenated solvents, esters, and alcohols.

Claims 11 - 15 (Canceled)

16. (Previously Presented) Process according to claim 17, wherein the organic sol comprises an organic liquid phase (a), the process comprising:

forming a dispersion comprising the titanium oxide particles, and at least one of the amphiphilic compounds in an organic liquid phase (b) based on a solvent with a lower polarity than that of the organic liquid phase (a);

separating a solid phase from the liquid phase (b); and

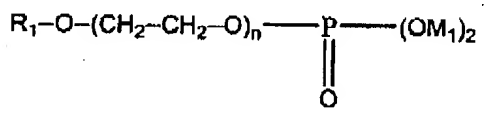
dispersing the solid phase obtained in this way in the organic phase (a).

17. (Currently Amended) Process for the preparation of an organic sol, comprising:

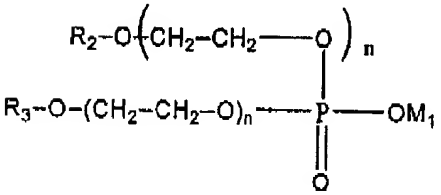
titanium oxide particles;

an organic liquid phase;

at least one amphiphilic compound having a formulae:



or



wherein,

R_1, R_2, and R_3 are a linear or branched alkyl group, a phenyl group, an alkylaryl group or an arylalkyl group;

n represents the number of ethylene oxide units and wherein n is from two to twelve; and

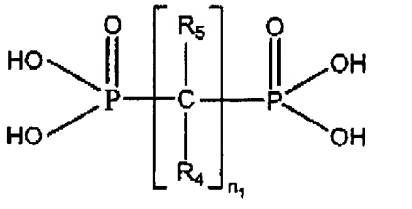
M1 represents a hydrogen, sodium or potassium atom, the process comprising the following steps:

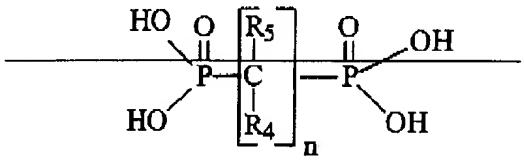
a) preparing, as starting product, titanium dioxide particles by hydrolysis of at least one titanium compound A in the presence of at least one compound B selected from the group consisting of:

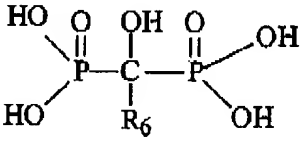
(i) acids which have:

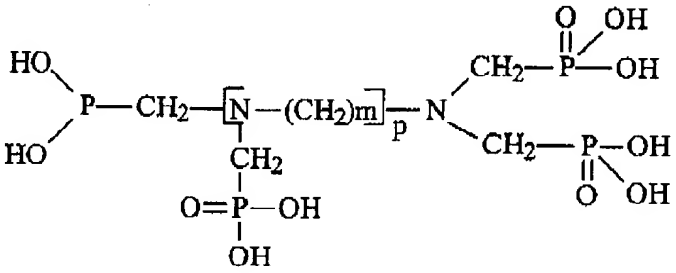
- either a carboxyl group and at least two hydroxyl and/or amine groups,
- or at least two carboxyl groups and at least one hydroxyl and/or amine group,

(ii) organic phosphoric acids of the following formulas:









in which ~~n~~ n_1 and m are integers between 1 and 6, p is an integer between 0 and 5, R_4, R_5 and R_6 identical or different represent a hydroxyl, amino, aralkyl, aryl, alkyl group or hydrogen group,

(iii) compounds capable of releasing sulphate ions in an acid medium,

(iv) salts of the acids described above

and in the presence of anatase titanium dioxide seeds;

b) optionally at least partially covering the particles by a layer of at least one of a silicon oxide, hydroxide or oxyhydroxide or a metallic oxide, hydroxide or oxyhydroxide; and

c) mixing the amphiphilic compound and the organic liquid phase together, then dispersing the titanium oxide particles in the mixture obtained, or forming a mixture of titanium oxide particles and at least one of the aforementioned amphiphilic compounds, then dispersing said mixture in the liquid phase.

18. (Previously Presented) Process according to claim 17, comprising, as the starting product, titanium dioxide particles which were obtained by the hydrolysis process and in which the anatase titanium dioxide seeds are of a size no greater than 8 nm and are present in ratio by weight expressed in TiO_2 present in the seeds/titanium present before the introduction of the seeds into the hydrolysis medium, expressed in TiO_2 comprised between 0.01% and 3%.

19. (Previously Presented) Process according to claim 17, comprising, as the starting product, titanium dioxide particles which were obtained by the aforementioned hydrolysis process and in which the titanium compound A is titanium oxychloride.

20. (Previously Presented) Process according to claim 17, comprising, as the starting product, titanium dioxide particles which were obtained by the aforementioned hydrolysis process and in which compound B is citric acid.

21. (Previously Presented) Process according to claim 17, comprising, as the starting product, titanium dioxide particles which were obtained by a process comprising the aforementioned hydrolysis and in which precipitate formed is separated from hydrolysis medium then redispersed in water resulting in a dispersion of titanium oxide in water and where said dispersion is dried at a temperature no greater than 120°C.

22. (Previously Presented) Process according to claim 17, wherein the organic sol is subjected to an ultrafiltration treatment.

23. (Canceled)

2. The following is an examiner's statement of reasons for allowance: The newly cited reference to Chopin et al, US 6,740,312, corresponds to the PGPUB, US 2003/0082122 that was cited in the Office Action mailed December 9, 2003. Chopinet lacks a disclosure of the claimed amphiphilic compounds having polyoxyethylene group(s). The amendments to the claims more clearly define the invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM